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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,680	09/26/2003	Robert L. Doubler	ZMS-EF11US	2033

43541 7590 05/18/2007
WOOD, HERRON & EVANS (ZIMMER SPINE)
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441 VINE STREET
CINCINNATI, OH 45202

EXAMINER

SWIGER III, JAMES L

ART UNIT	PAPER NUMBER
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3733

MAIL DATE	DELIVERY MODE
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05/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/673,680

Applicant(s)

DOUBLER ET AL.

Examiner

James L. Swiger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/2/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/19/2007 has been entered.

Claim Rejections - 35 USC § 103

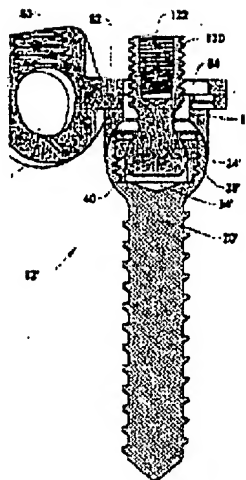
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 9 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Mullane (US 6,050,997) in view of Schar et al. (US patent 6,866,664). Mullane discloses a device for use in spinal fixation comprising a polyaxial bone screw (Fig. 2) that is capable of engagement into bone with an effective amount of torque (via threads, note 26 in Fig. 2), and that has a second end that is adapted for swivelable attachment to a linking member (Fig. 3, 32). Mullane further discloses a connecting member (82), and a portion that is capable of function as linear fastener. See Drawing

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of Fig. 14 below.

FIG. 14

In addition to the bone screw of Fig. 2 having a substantially spherical second end (opposite the threaded portion), Mullane also discloses a support collar (18), with a substantially spherical first surface and a generally flat second surface both of which aid in providing a clamping force for locking the linking element. See Fig. 14 above. Mullane further discloses a collet member (24') with a tapered inner compression surface (see Fig. 14 above), and also a linking member tensioning means that has an internal bore with threads (122) that is capable being gripped by a threaded attachment to provide the necessary tensile force with respect to the collet.

Mullane disclose the claimed invention except for more specifically, an effectuate force to secure the spinal element when used in the first end. Schar et al. disclose a spinal device that has a clamping force to secure a spinal fixation device without the use of threads, effective to secure it. See Col. 2, lines 50-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to

construct the device of Mullane having at least a linear securing force in view of Schar et al. to reduce the torque placed on the invention and to ensure proper fixation of the spinal element.

Claims 3-4, 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Mullane '997 and Schar et al. as applied to claim 2 above, in further view of Bradley, Jr. (US 4,684,284). The combination of Mullane '997 and Schar et al. '664 disclose the claimed invention except for a compression ring member with a base and front end and an inner tapered compression surface. Bradley, Jr. discloses a compression ring (23) with a base end (24) and a front end (considered opposite side of 24), and a tapered compression surface (see curved portion proximate to 23). The curved surface and the compression ring allows locking engagement via a load compression. (Col. 2, lines 45-50). This arrangement is also capable of appropriate clamping/gripping due to the arrangement of the ring and the wedge surface in overlapping engagement with the collet member. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of the combination of Mullane '997 and Schar et al. having at least a compression ring member in view of Bradley, Jr. to better engage with the collet in either first or second positions to secure the fixation assembly.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Mullane '997 and Schar et al. and further in view of Harms et al. (US 4,946,458). The combination of Mullane '997 and Schar et al. disclose the claimed invention except for a groove extending around the circumference of the first end of the

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linking element. Harms et al. discloses a portion that is capable of being a groove around a linking element (Fig. 1, 17). Though disclosed as a "bore" it is considered as a groove around the appropriate end of a linking element, and is further capable of receiving a locking pin or any means for that matter as a means for gripping and providing a tensile load on the linking member (Col. 2, lines 50-54). It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of the combination of Mullane '997 and Schar et al. having at least a groove around the linking member in view of Harms et al. to better place a tensile load on the linking member.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Mullane '997 and Schar et al. in further view of Hegde et al. (US Pub 2004/0162558 A1). The combination of Mullane '997 and Schar et al. Mullane discloses the claimed invention except for a portion of the tensioning means that includes a frangible stem. Hegde et al. disclose a portion of a threaded head extension (180) that is frangible, or that which may be broken off as needed, or when a preferred tension is reached [par 0043]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Mullane having at least a portion of the tension means has a frangible stem that is capable of being broken at a predetermined tension in view of Hegde et al. to better fit the device to its appropriate use in attachment to the spine.

Response to Arguments

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Applicant's arguments with respect to claims 1-9 and 15-16 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

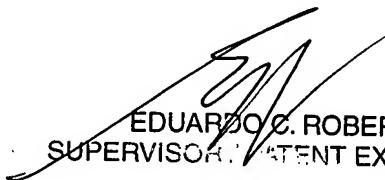
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James L. Swiger whose telephone number is 571-272-5557. The examiner can normally be reached on Monday through Friday, 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on 571-272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

 5/14/07


EDUARDO C. ROBERT
SUPERVISOR, PATENT EXAMINER